MODEL EX356A73

TRIAXIAL CHARGE MODE ACCELEROMETER WITH UHT-12™ ELEMENT

- Eliminates need for high temperature triaxial measurements to be taken with three separate single-axis accelerometers mounted on a triaxial mounting block
- ATEX/CSA/IECEx intrinsic safety certification allows sensor to be used worldwide in potentially-explosive environments
- Smaller, lighter design allows for simplified installation in even the tightest of spaces
- Use of UHT-12™ sensing element and hermetically-sealed, nickel alloy housing provides sensor endurance in very high temperatures

PROVIDES MORE CONSISTENT SENSITIVITY OVER A WIDE TEMPERATURE RANGE

PCB Piezotronics utilizes a UHT-12™ element that features a proprietary crystal technology sealed in a hermetic package for long-term reliability. The element has no pyroelectric output that provides accurate low-frequency measurements and reduced thermal noise spikes that eliminate false alarms during monitoring. The element also has a more consistent sensitivity over a wide temperature change to provide greater accuracy. The shear mode crystals prevent base strain and transverse measurement errors.

TYPICAL APPLICATIONS

- Aviation/Power Generation Turbine Research & Development
- Commissioning of Nuclear Power Plants
- Vehicle Exhaust System NVH
## SPECIFICATIONS

### Model Number
EX356A73

### Performance
- **Sensitivity (±5%)**: 3.2 pC/g  
  0.33 pC/(m/s²)
- **Measurement Range**: ±500 g pk  
  ±4905 m/s² pk
- **Frequency Range (±5%)**: Up to 4 kHz
- **Resonant Frequency**: 25 kHz
- **Transverse Sensitivity**: ≤ 5 %
- **Non-Linearity**: ≤ 1 %

### Environmental
- **Overload Limit (Shock)**: ±2000 g pk  
  ±19620 m/s² pk
- **Operating Temperature Range**: -67 to +900 °F  
  -55 to +482 °C
- **Base Strain Sensitivity**: 0.003 g/µε  
  0.029 (m/s²)/µε
- **Radiation Exposure Limit (Integrated Neutron Flux)**: 1 E10 N/cm²
- **Radiation Exposure Limit (Integrated Gamma Flux)**: 1 E8 rad

### Electrical
- **Capacitance (Pole-to-Pole)**: 120 pF
- **Insulation Resistance (Room Temp)**: >1 GΩm
- **Insulation Resistance (900 °F / 482 °C)**: >100 kΩm
- **Output Polarity**: Negative
- **Electrical Isolation**: Case Isolated (>1E6 Ohm)

### Physical
- **Sensing Geometry**: Shear
- **Sensing Element**: UHT-12™
- **Housing Material**: Nickel Alloy
- **Sealing**: Hermetic Welded
- **Mounting Thread**: 8-32 Male
- **Electrical Connector**: Three 10-32 Coaxial Jacks
- **Electrical Connector Position**: Side
- **Weight**: 5.3 oz  
  150 g

### SENSOR CHAIN COMPONENTS

<table>
<thead>
<tr>
<th>Sensor</th>
<th>Non-Radiation Environment</th>
<th>Radiation Environment</th>
</tr>
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<tbody>
<tr>
<td>EX356A73</td>
<td>023FZX0XXGA</td>
<td>023FZX0XXFZ</td>
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<tr>
<td>Hardline Cable</td>
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<tr>
<td>Softline Cable</td>
<td>003EBXXXE</td>
<td>N/A</td>
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<td>Charge Amplifier</td>
<td>422E35 (1 mV/pC) 422E36 (10 mV/pC)</td>
<td>422E65/A (1 mV/pC) 422E66/A (10 mV/pC)</td>
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</tbody>
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